

Organic diet cuts pesticide levels in body, says study

UC Berkeley researchers suggest higher sources of pesticide exposure for children living in farming communities

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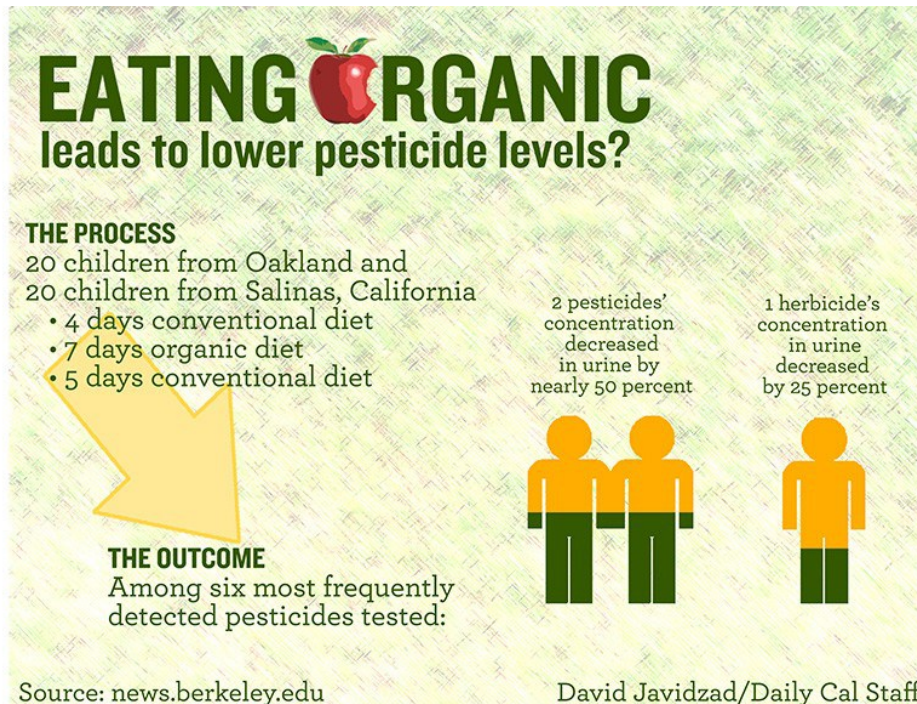
Making the switch to an organic diet could quickly reduce the body's level of certain pesticides, according to a new study by the [Center for Environmental Research and Children's Health \(CERCH\)](#) at UC Berkeley's School of Public Health.

The study was led by CERCH Associate Director Asa Bradman and involved researchers collecting the urine samples of 20 children from urban communities in Oakland, Calif., and 20 children from agricultural communities in Salinas, Calif., over 16 consecutive days. During this time, researchers alternated the children's diets between "conventional" and organic.

The study was published in the October issue of the journal *Environmental Health Perspective*.

Researchers tested samples for metabolites - components of the body's metabolizing process, which reflect the body's exposure to certain pesticides.

Among the six most frequently detected pesticides, two decreased by nearly 50 percent when children were on the organic diet, and levels of a common herbicide fell by 25 percent. Three other frequently detected pesticides were not significantly lower when on the organic diet.



Bradman's study defined "organic" in the same way the U.S. Department of Agriculture does: foods that receive no treatment from synthetic pesticides. Conventional diets could include a range of pesticides found in most fruits and vegetables.

According to Bradman, the purpose of the study was to see how much of children's exposure to pesticides results from their diet. Bradman noted possible contamination in homes and nearby agricultural areas as a way of accounting for the higher pesticide levels found in children from the Salinas Valley.

Nina Holland, an adjunct professor in the campus School of Public Health who worked with Bradman on the study, said this was "one of the most remarkable studies of its kind" and could encourage farmers to grow organically.

"The Environmental Protection Agency is becoming more and more aware that you need to (be) protecting all individuals,

all age groups,” Holland said. “Yes, all these pesticides are regulated. However, even the small concentration of these pesticides in the produce can be unsafe for some people.”

According to Bradman, although the research took place in 2006, the results are still relevant because all the pesticides studied are still in use today.

“If you eat foods with pesticides, your urine will have pesticides - that’s hardly a new observation,” said UC Berkeley professor of nutritional sciences and toxicology Barry Shane.

Bradman, however, said the study was intended to provide more definitive results to prove the health benefits of organic products rather than to be groundbreaking.

Both Bradman and Holland hoped that with a greater mindfulness of the health benefits of organic diets, the cost of organic foods would decrease and they could therefore become more popular.

“This study gives people a motivation ... to get produce that is less contaminated with pesticides,” Holland said.